aramid and having a denier between about 350 and 1,200, the fabric having first and second sides;

(b) positioning a thermoplastic film over at least one of the first and second sides of the fabric, the thermoplastic film selected from the group consisting of high density polyethylene, low density polyethylene, and ethylene vinyl acetate and having a thickness of less than about 24 mils;

(c) applying a pressure of between about 50 psi and 500 psi to the fabric and thermoplastic film at a temperature of between about 230 degrees Fahrenheit and 290 degrees Fahrenheit; and

(d) maintaining the pressure and temperature for between about 5 minutes and 15 minutes so that the thermoplastic film softens and bonds with the fabric, thus making the fabric air and moisture impervious.

Remarks

Claim 25 is pending in the present application.

Applicant's invention is directed to a method for making a cut and puncture resistant laminated *fabric* that is highly flexible and impervious to air and fluids. The method comprises a first step of selecting a fabric that is formed from high performance yarns. The yarns are selected from the group consisting of extended chain polyethylene, ultra high molecular weight polyethylene, and aramid. Yarns having a denier between about 350 and 1,200 have been found most suitable for forming a highly flexible fabric that can be rolled or easily flexed to conform to an opening or article to be covered.

A thin film of thermoplastic material is positioned on at least one side of the fabric. The thermoplastic film is selected from high density polyethylene, low density polyethylene, and ethylene vinyl acetate and desirably has a thickness of only between about 4 mils and 24 mils. As described in Applicant's specification, it has been found that "polyethylene and EVA films adhere well to fabrics constructed from high performance polyethylene fibers...given sufficient heat, time, and pressure".

Once the thermoplastic film has been positioned on the fabric, a pressure of between about 50 psi and 500 psi is applied to the fabric and film at a temperature of between about 230

degrees Fahrenheit and 290 degrees Fahrenheit. The temperature and pressure are maintained for between about 5 minutes and 15 minutes. It has been found that this temperature and pressure combination for a contact time of 5 to 15 minutes causes the thermoplastic film to soften and bond with the fabric. Additionally, some portion of the film is forced into the interstices of the fabric construction.

Thus, Applicant's invention is concerned with creating a composite fabric and film construction that possesses outstanding durability. Any chemical bonding or alterations in crystalline structure are not important so long as the physical properties (cut and puncture resistance, flexibility, and impermeability to air and fluids) are achieved in the end product.

Applicant has carefully reviewed the Examiner's rejections and believes they are now moot in view of the cancellation of Claims 1-21 and the addition of new Claim 25. Regarding the prior art, however, the Yagi et al. reference is directed to a fiber-reinforced polymer, molded, solid body, formed of the broad field of polymers, having a high tensile and flexural strength; i.e., low flexibility, and good electrical characteristics. The solid body is formed by applying a molten thermoplastic to the reinforcing material. Yagi et al. is not intended to be flexible in that the likely end use of Yagi et al.'s molded body is in the production of circuit boards, and the like. Even if it were, Yagi et al. is a substantially different process and would not create a flexible, cut and puncture resistant, protective fabric construction.

Again, the Rossetti reference is also directed to an entirely different, and non-relevant, art that results in a low loss electrical printed circuit board comprising polyolefin, fiberglass, and metallic foil. The resulting composite is a rigid fiberglass-reinforced insulating board, also most suitable for printed circuit board applications. Also, the Rerolle et al. reference is directed to a process for making laminated sections by winding a sheet of paper or fabric (not formed of high performance cut and puncture resistant yarns) and a plastic film on a mandrel in the cold, without any addition. The wound spool of material is removed and can be heated (at a temperature only around 130 degrees Fahrenheit) in a subsequent operation to bond the layers together. In sum, none of the prior art references disclose or suggest a process for forming a cut and puncture resistant, flexible fabric construction. Further, none of the references disclose or suggest bonding, or laminating, a softened thermoplastic film to the fabric so that the final fabric construction is also impervious to air and fluids.

Conclusion

Applicant has canceled Claims 1-21. New Claim 25 more particularly claims Applicant's invention and further distinguishes Applicant's invention from the prior art. For this reason, Applicant believes this case is now in condition for an immediate allowance with Claim 25 and such action is respectfully requested. If any issue remains unsolved, Applicant's counsel would welcome the opportunity for a telephone interview to expedite allowance.

Respectfully submitted,

Lewis S. Rowell

Lewis S. Rowell
Registration No. 45,469
C. Robert Rhodes
Registration No. 24,200
WOMBLE CARLYLE SANDRIDGE & RICE, PLLC
300 N. Greene Street, Suite 1900
Greensboro, NC 27401
(336) 574-8090

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VERSION WITH MARKINGS TO SHOW CHANGES MADE

IN THE CLAIMS:

Please cancel Claims 1-21 without prejudice or disclaimer of the subject matter thereof.
Please add the following new claim:

25. (New) A method for making an impervious cut and puncture resistant laminated fabric, comprising:

(a) selecting a fabric formed of high performance yarns, the yarns selected from the group consisting of extended chain polyethylene, ultra high molecular weight polyethylene, and aramid and having a denier between about 350 and 1,200, the fabric having first and second sides;

(b) positioning a thermoplastic film over at least one of the first and second sides of the fabric, the thermoplastic film selected from the group consisting of high density polyethylene, low density polyethylene, and ethylene vinyl acetate and having a thickness of less than about 24 mils;

(c) applying a pressure of between about 50 psi and 500 psi to the fabric and thermoplastic film at a temperature of between about 230 degrees Fahrenheit and 290 degrees Fahrenheit; and

(d) maintaining the pressure and temperature for between about 5 minutes and 15 minutes so that the thermoplastic film softens and bonds with the fabric, thus making the fabric air and moisture impervious.